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Technological Aspects of Deregulation

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Technological Aspects of Deregulation

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Abstract

Telecommunications deregulation and privatization was a good step to create new demands for a new infrastructure and new services. This increasing demand stimulated the whole industry and, as a result, generated the creation of many new companies. Competition drove prices down, which made consumers happier and the companies more competitive in the international market place. Accordingly, universal services are now offered countrywide and there are no major concerns regarding the licensing process. Thus, international coordination and the usage of the telecommunications infrastructure might make new legislative initiatives necessary, but there is no way back to regulated markets.

TECHNOLOGICAL ASPECTS OF DEREGULATION

*Rainer Liebich**

Ladies and gentlemen, it is a pleasure for me to talk to you. I think my role this morning is to prove to you that despite regulation, despite the local academic world, it is still possible to conduct business in telecommunications. We certainly have learned during the past sessions that different industries seem to bear similar problems or even the same problems. Indeed, there are some issues that only relate to certain specific industries and markets.

The telecommunications market overall is a global business, a global market, and only those companies that can offer their customers global products and services can be successful. I know from representing AT&T in the past that its role in the United States is different from its role in Germany in getting access to the market. Although there are many strategic global alliances that help to by-pass some global issues, it is necessary to have local partners in order to enter local markets.

My first point is that we must keep in mind that the telecommunications market is booming. The overall development cannot be stopped through regulation because there are many emerging markets. On the other hand, the telecommunication sector is heavily influenced by global market forces, and technology trends have a great impact on regulation. The focus of my statement is to show you a little bit of the industry trends and how they impact regulatory schemes. I also want to attempt a first judgement about whether the existing nine months of regulation have been successful or not.

A good example of change in the telecommunications market is evidenced by the Deutsche Bundespost. In the recent past, the Deutsche Bundespost had a sign in its telephone consoles that read *Fasse dich kurz*, or "Make it Short Please". This reasoning is because at the time there were limited infrastructure capacities and the demand exceeded the capabilities. Today, however, Telekom always announces *Ruf mal wieder an*, or "Please Call Again." Instead of *Fasse dich kurz*, they invite customers to

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utilize the infrastructure, and this situation is probably the best indication that a lot of things have changed.¹

If we look further to the intent of the telecommunications law ("TKG"), then we can see various motivations: first, the intent to improve competition; second, an ambition to provide universal services; third, a need to regulate the licensing process; and fourth, the desire to have technical issues, such as tariff pricing, resolved. Although nine months are probably a little bit short to make a final judgement, I personally believe that the first results have been positive. If we look at the market today, then we realize that the volume of activities, as well as the infrastructure, are growing. The infrastructure might only be a problem in the first few years because competition tends to build up additional capacities and the digital technology will expand bandwidth.

Let us now see what has changed with providers and how that change has impacted users. There are a multitude of issues on various matters within the mobile or voice markets. In the mobile market, there are more restricted licensing procedures because the growing usage of frequencies challenges the capacity of the infrastructure of the overall network. On the other hand, it is clear that mobile telecommunications is a fast growing market. There are more service resellers and, even now, many people are accusing D2 of exhibiting oligopolistic behavior, by blocking other competitors.

In the voice market, there are also an increasing number of providers, albeit within a different structure. Some companies dig holes and put their money into the soil for the purpose of building an infrastructure. Other providers just use the infrastructure of others in order to offer services that are more related in an added value. Thus, these providers just re-sell capacities, instead of building up their own infrastructure. Overall, there are many new investments in budding infrastructures. Therefore, I believe on the whole that infrastructure, from a capacity point of view, will not be a limiting factor in the future.²

1. I also think we must keep in mind that the deregulation of the telecommunications market is not nine months old; it is the *telephone monopoly* that was deregulated nine months ago. We certainly had some regulatory steps concerning telephone equipment and data before that time.

2. Such limitations have been witnessed, for example, in the air traffic sector, due to technical developments.

In the German market, there are different structures when we compare the business systems of different companies. Some long distance companies exist, like Otelo or Arcor, but there are also a growing number of local providers who are concentrating solely upon city networks and conducting business only with business customers. They are building high speed infrastructures and offering specialized services in cities such as Frankfurt, Munich, and other metropolitan areas. On the other hand, full service providers, such as Net Cologne, only operate in Cologne, but they offer their services to a broad range of customers. Typically, local providers combine with utility companies and with the local Sparkasse to build a total end-to-end product for local customers. They offer long distance service through interconnection with other companies' infrastructures.

The early results of deregulation in some areas spurred estimates that new providers have obtained market shares of twenty percent, even in this short period of time. Clearly, users are benefiting from the creation of new products and the recent dramatic price erosion.³ From the users' point of view, the situation is much improved, although increased competition challenges users to decide which offer to choose. Service companies are encountering increased margin difficulties because there are no product differentiations anymore, despite pricing variances. Additionally, some industry analysts are already asserting that after nine months there is a big shakeout coming. Many are predicting a concentration by some takeovers in the telecommunications business.

When talking about the infrastructure, I think we must realize that we still are ahead of the real technical revolution. At the moment, many services are still based on analog technology, and the integration of different products are creating technical problems. With full digital networks comes full digital transmission and full digital end-user devices. Thus, digitalization will increase the overall capacity of infrastructure by a factor one to ten.

Looking ahead, the access to different households will be achieved through different technologies. Access will not just come through telephone lines, but also through electricity cables and, some people are predicting, through water pipes.

3. Despite unclear pricing structures among providers, prices continue to drop.

Even television-cable and television-terrestrial networks will be used to access frequencies that will provide telephone services. There will be some problems to solve, specifically related to digital technology. For instance, a lot of integration problems on hardware, software, and standards will need to be resolved. Another big problem will concern multimedia. The challenge will be to develop a common user interface that is easy to handle and that allows the end-user to take advantage of the infrastructure and the services offered. The total technology, however, will become increasingly digital. Moreover, I personally believe that nothing will limit the infrastructure and bandwidth available for interested companies. I am not saying that this situation will be an easy task; technical solutions, however, will be discovered.

Returning to regulatory schemes, I am convinced that the present experience in deregulation in the TKG has been a success. The market was stimulated, competition increased, and prices dropped. There are some minor issues, which have not yet been resolved. But, we can safely say that the deregulation was successful. It is equally important to note that telecommunications is a growing market. Thus, some common problems, such as the lack of new added value services, the offering of sole phone services, and the overall pricing problems on high speed transmission, will be solved by the market power. Video conferencing, ISDN, and video telephoning are still too expensive. But I think that it is not just a regulatory issue. It is more or less a technical problem connected to market development. Last, when analyzing regulation and deregulation, we must keep in mind that the telecommunications market cannot grow in tandem with local laws because international rules or regulations must be considered. Overall, there certainly will be a lot of new issues, which are not presently covered by the TKG.

Future telecommunications technology will change many different industries, especially in the multimedia sector. The telecommunications infrastructure will become a kind of overall distribution system for electronic products and new services. Since, however, the same infrastructure carries digital content, it is impossible to determine whether an infrastructure has data services or, alternatively, phone products. Thus, there will be a lot of different areas of domestic legislation, on issues ranging from pornography regulation to electronic commerce to how

states should obtain added value taxes on international transactions.

In conclusion, telecommunications deregulation and privatization was a good step to create new demands for a new infrastructure and new services. This increasing demand stimulated the whole industry and, as a result, generated the creation of many new companies. Competition drove prices down, which made consumers happier and the companies more competitive in the international market place. Accordingly, universal services are now offered countrywide and there are no major concerns regarding the licensing process. Thus, international coordination and the usage of the telecommunications infrastructure might make new legislative initiatives necessary, but there is no way back to regulated markets.